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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/036,966	12/20/2001	David B. Adair	064706-0013	4575

33401 7590 12/29/2005

MCDERMOTT, WILL & EMERY (LOS ANGELES OFFICE)
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EXAMINER

HARTMAN JR, RONALD D

ART UNIT	PAPER NUMBER
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2121

DATE MAILED: 12/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/036,966

Applicant(s)

ADAIR ET AL.

Examiner

Ronald D. Hartman Jr.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9-14 and 20 is/are allowed.
- 6) ☒ Claim(s) 1-4 and 15-18 is/are rejected.
- 7) ☒ Claim(s) 5-8 and 19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

As per claim 1-4, the claimed invention is directed to non-statutory subject matter. That is, claims 1-4 provide for a method that does not meet the tangibility requirement since a calculation is not a physical transformation of data, but rather is simply data manipulation, since it is not until the result of the calculation is actually applied in a meaningful way that it becomes a tangible result. Suggested claim language would be, "assigning a production order to the manufacturing plant based on the calculated balanced assignments", or something to that affect in order to meet the tangibility requirement.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-4 and 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nam, U.S. Patent No. 6,141,598, in view of Dietrich et al., U.S. Patent No. 5,630,070.

As per claims 1 and 15, Nam teaches a vehicle assembly line control system and method comprising:

- receiving order data descriptive of a plurality of requested vehicles, the order data including specified vehicle options (e.g. C5 L33-36 and C2 L45-48);

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- combining the order data with manufacturing plant data, the plant data representing vehicle production capabilities of the plant, in order to generate a manufacturing plant production order and identifying attribute constraints within the manufacturing plant production order by determining which of the specified vehicle options of the manufacturing plant production order are subject to the capabilities of the manufacturing plant (e.g. Interpreted to correspond to taking the dealer orders and comparing them against the actual manufacturing capabilities of the manufacturing plant in order to generate a manufacturing production order for the requested vehicles (e.g. C5 L37-43); and
- performing a calculation on the production order and the attribute constraints, the calculation dividing the production order into balanced assignments according to the attribute constraints (e.g. utilization of the "leveling formula", C9 L1- C10 L49).

As per claims 1 and 15, Nam does not specifically teach the utilization of a linear equation for use during the manufacturing of the vehicles in order to aid in the balancing of work assignments.

Dietrich et al. teaches this missing feature within the context of a manufacturing resource planning (MRP) system (e.g. C1 L40-60 and C17 L3-6).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teachings of Dietrich et al. into the system and method disclosed by Nam for the purpose of allowing a well known of representing a complicated system linearly through utilization of a constraint matrix so that the large number of interconnections and relationships may be solved in a quick reliable fashion, thereby providing a simple well known way of optimizing a manufacturing process which is dependent on the resources available at a manufacturing plant, in other words for a MRP (manufacturing resource planning) process.

As per claim 2, although Nam's combined system does not specifically disclose the manufacturing data including limitations on the combination of features or variations that a factory is prepared to produce, it a feature that is obviously contemplated by

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Nam's disclosed system since clearly there is a certain number of paint colors, or trim options that are available to the dealer for ordering, and the manufacturing plant is obviously bound by the number of variations the plant is able to produce, and this information would obviously be available so that the dealer does not waste time in selling or ordering a vehicle that the manufacturing plant cannot produce.

As per claim 3, Nam's combined system teaches upper and lower bounds (e.g. "predetermined range", C4 L40-45).

As per claims 4 and 18, Nam's combined system discloses the utilization of weightings (e.g. C10 L48-50).

As per claim 16, Nam teaches a computer (e.g. Figure 3 elements 100 and 200).

As per claim 17, Nam teaches multiple vehicular attributes (e.g. multiple options; C2 L45-48).

Allowable Subject Matter

4. Claims 9-14 and 20 are allowed.

Claims 5-8 and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

As per claims 5, 9, 19 and 20, the prior art of record fails to teach the balancing of vehicle orders among a plurality of manufacturing plants, in combination with the other claimed features and or limitations as claimed.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronald D. Hartman Jr. whose telephone number is

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(571) 272-3684. The examiner can normally be reached on Mon.-Fri., 11:00 - 8:30 pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on (571) 272-3687. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Ronald D Hartman Jr.

Patent Examiner

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x RDI

December 20, 2005


Anthony Knight
Supervisory Patent Examiner
Group 3600